

North American Commission on Stratigraphic Nomenclature

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NOTE 65: RECORDS OF STRATIGRAPHIC COMMISSION, 1995–2002

Note 65 summarizes the activities of the North American Commission on Stratigraphic Nomenclature (NACSN) from November 1995 to October 2002 and is condensed from the minutes of the NACSN's 50th to 57th annual meetings (available upon request from the NACSN archivist N. P. Lasca, Lapham Hall, 3209 North Maryland Avenue, University of Wisconsin, Milwaukee, Wisconsin 53211.) The NACSN activities can be divided into four main categories: (1) activities related to revising the *North American Stratigraphic Code*; (2) committee work, (3) interaction with other groups; and (4) outreach activities related to the discussion and promotion of the science of stratigraphy and the application of the *North American Stratigraphic Code*.

AMENDMENTS TO THE NORTH AMERICAN STRATIGRAPHIC CODE

The current version of the *North American Stratigraphic Code*, hereafter referred to as the Code, was published 20 yr ago. (NACSN, 1983). One of the functions of the NACSN is to periodically review the Code to ensure that it meets the present and emerging needs of the profession. This is done through consideration and publication of proposed amendments to the Code, as provided for in Article 21.

Note 63 (Application for amendment of the *North American Stratigraphic Code* concerning consistency and updating regarding electronic publishing) and Note 64 (Application for revision of Articles 48–54, biostratigraphic units, of the *North American*

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James O. Jones (1935–1999) obtained his B.Sc. degree in geology from Midwestern State University in 1962; his M.Sc. degree from Baylor University in 1964; and his Ph.D. in geology from the University of Iowa in 1971. He first taught at Southern Arkansas University, but spent most of his career, from 1977 onward, at the University of Texas at San Antonio. He retired from the U.S. Army Reserve as a lieutenant colonel in 1995. He was the 1997 chair of the NACSN.

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Stratigraphic Code) were accepted with minor revision at the 57th annual meeting of the NACSN in 2002.

Note 63 included updating of Article 4 of the Code concerning publication using electronic media as well as allowing for the electronic publishing of new stratigraphic units. The revision to Article 58 (Allostratigraphic Units), as suggested in Note 63, contained an inconsistency that was detected during the 1-year public-comment period that is required between the publication of the note and the vote on approval by the NACSN. Article 58 originally contained the words "stratiform" and "sedimentary," although subsequent articles and remarks on allostratigraphic units make it clear that lithology is not a factor in the establishment of allostratigraphic units. This inconsistency was corrected in the final vote on approval of Note 63, and this change will be indicated in the revised version of the Code, which will be posted on the NACSN Web page at <http://www.agiweb.org/nacsn/>.

Note 64 proposed a complete revision to the section of the Code related to biostratigraphic units (Articles 48–54). It was accepted with minor changes in the wording of Article 48 and Article 50, remark f, from what was published in Note 64. Again, the approved text will be incorporated in the revised version of the Code, which will be posted on the NACSN Web page. In addition to Web posting of a revised version of the Code, it was decided at the 57th annual meeting to investigate options for producing a print version of the revised Code. It appears in the November 2005 issue of the *AAPG Bulletin*, p. 1547–1591.

The preparation of these two notes was the culmination of many years of activity by the NACSN, both of which were an outgrowth of the "Report on Inconsistencies, Errors and/or Imperfections of the North American Stratigraphic Code" submitted by a committee chaired by I. Ferrusquía-Villafranca in 1995. This report led to the establishment of two separate working groups in 1996: one focused on revision of biostratigraphic units (Articles 48–54) and the other focused on revisions to other sections of the Code. The deliberations of these working groups resulted in the recommendations that were published in the *AAPG Bulletin* in February 2001 as Notes 63 (Ferrusquía-Villafranca et al., 2001) and 64 (Lenz et al., 2001).

Consideration of an amendment to the Code proposed by G. Vai occurred at the 57th annual meeting. The proposal consisted of two separate changes related to allostratigraphic units (Article 58) and was motivated by a desire to bring the Code closer in usage to the *International Stratigraphic Guide*. One of the proposed changes was related to the removal of the words "stratiform" and "sedimentary," a change that was implemented as the result of the acceptance of Note 63. The other changes included the addition of the words "unconformity/discontinuity-bounded" to Article 58, remark a, and replacing the terms "allogroup," "alloformation," and "allomember" in Article 59 (and consequently elsewhere in the code) with the terms "supersynthem," "synthem," and "subsynthem." These other changes were discussed,

but the proposal was not recommended for publication at this time, in part because the chair of the International Subcommittee on Stratigraphic Classification (ISSC) had requested that both ISSC and NACSN put a 10-yr moratorium on the adoption of the term “synthem” in proposed amendments.

In 1985, the NACSN approved the publication of a note, proposing to amend the Code to include “Hydrostratigraphic Units.” Between 1985 and 1999, the effort to prepare this note was spearheaded by Paul Seaber. At the 55th annual meeting, Paul Seaber indicated to the NACSN that he wished to withdraw his proposed report on hydrostratigraphic units and recommended that NACSN entertain a new proposal, in part because of new developments in the science since the original report was submitted. The NACSN accepted this recommendation and issued a note of thanks to Paul Seaber for his sustained efforts on this topic. The NACSN is still awaiting the submission of a revised proposal on hydrostratigraphic units. R. Fakundiny and B. R. Wardlaw are currently shepherding this topic.

A suggestion made by the ad hoc Committee on Inconsistencies, Errors, and/or Imperfections of the *North American Stratigraphic Code* raised the issue of the need for diachronic units in the Code. Guest Paul Karrow presented a strong case at the 53rd annual meeting of the NACSN on the utility, functionality, and usage of diachronic units. As a result of his submission, the NACSN established a Subcommittee on Diachronic and Allostratigraphic Units, consisting of N. P. Lasca, P. Karrow, and D. Fullerton. At the 55th annual meeting, the subcommittee noted that there were three places in the Code where clarity could be improved and recommended that the words, “e.g., Wisconsin Episode” be added at the end of the first sentence in Article 94, but that no action be taken on the other two potential problems.

COMMITTEE ACTIVITIES

The NACSN generally establishes committees to study an issue in detail and to make recommendations to the commission as a whole. During the period 1995–2002, several committees were established that related directly or indirectly to the process of amending the Code, including the ad hoc Committee on Inconsistencies, Errors, and/or Imperfections of the *North American Stratigraphic Code*. The activities of these committees were summarized in the previous section.

Established in 1991 and chaired by D. Owen, the Allostratigraphy–Sequence Stratigraphy Committee was active between 1995 and 2002 and has spanned all four main activities of the NACSN. Initially formed to determine if there was a need to revise the Code to include sequence-stratigraphic units, the committee has also interacted extensively with the ISSC as well as other groups. In addition, it has been involved in several efforts to promote the discussion of sequence-stratigraphic nomenclature, as summarized in the section “Outreach Activities.” Between 1995 and 1999, the committee chair also served on the ISSC Working Group on Sequence Stratigraphy. As reported at the 54th annual meeting, the ISSC Working Group submitted its final reports in 1999 but was unable to reach a consensus regarding sequence-stratigraphic nomenclature. A subsequent AAPG Hedberg Conference in 2001 on “Sequence-Stratigraphic and Allostratigraphic Principles and Concepts” provided some guidance to the NACSN. Key points from the Hedberg conference presented at the 56th annual meeting were as follows. (1) Should sequence stratigraphy have formal units recognized in the Code? No, but the issue should be revisited in 10 yr. (2) Should the informal nature of sequence stratigraphy be recognized in the Code? Yes. (3) The goal of reconciling allostratigraphic units in the Code with the unconformity-bounded units of the *International Stratigraphic Guide* (Salvador, 1995) was considered desirable. Furthermore, allostratigraphic units should be retained and expanded to include volcanic rock bodies. This last recommendation was implemented in 2002 with the removal of the terms “stratiform” and “sedimentary” from Article 58 of the Code, as previously outlined.

A long-standing committee, chaired by R. Jordan, has been preparing a history of the NACSN and its predecessors. This work is still ongoing. At the 54th annual meeting, a committee chaired by I. Ferrusquía-Villafranca was established to revise, update, and post on the NACSN Web site the Spanish version of the Code. The current version (Sanchez-López and Cabib-Levi, 1984) is still available from the Sociedad Geológica Mexicana (Mexico City, fax +52 55 541 0116, e-mail care of Sociedad Geológica Mexicana, isabel@geologia.unam.mx). Note that a French translation of the 1983 version of the Code is available but only in hard copy (MERQ, 1986).

The ad hoc Committee on Inconsistencies, Errors, and/or Imperfections of the *North American Stratigraphic Code* identified several issues related to the Precambrian, specifically the integration of the Code

with respect to the Precambrian timescale approved by the International Union of Geological Sciences. Instead of delaying the presentation of other revisions to the Code until these issues were resolved, it was determined at the 54th annual meeting that a committee chaired by R. M. Easton be established to deal with updating the Code with respect to the Precambrian. This integration has proven more difficult than anticipated because of philosophical differences between the Code and the *International Stratigraphic Guide*. As reported at the 57th annual meeting in March 2003, the committee chair discussed these issues at a Geological Association of Canada Nuna conference on "Generation, Calibration, and Application of Geological Timescales" (Easton, 2003).

INTERACTION WITH OTHER GROUPS

In May 1997, the NACSN became a member society of the American Geological Institute (AGI). One of the benefits of this linkage has been the establishment of a Web page for the NACSN at <http://www.agiweb.org/nacsn/>, which contains links to a digital version of the Code (since October 1999) and Notes 63 and 64 (since February 2001). The site also provides a listing of current officers and commissioners and the bylaws of the NACSN. In addition, the NACSN has a designated AGI representative who provides annual reports to the NACSN on AGI activities.

In addition to previously noted interactions with the ISSC, the ISSC also presents a report at each annual meeting of the NACSN on its activities.

Following deliberations at the 50th annual meeting, greater efforts were made by the NACSN to interact with the Association of Earth Science Editors (AESE), as geoscience editors are critical to seeing that the Code is properly applied in published geoscience. As a result of this initiative, presentations on the Code were made at two AESE annual meetings (Easton, 1996b, 2000), and the association was consulted with respect to proposed revisions to Article 4 of the Code, which deals with the subject of publication.

At the 53rd annual meeting, discussion ensued regarding the NACSN applying for status as an affiliated society of the Geological Society of America. A possible affiliation with the AAPG and the Society for Sedimentary Geology (SEPM) was also raised during this discussion. The NACSN decided at that meeting not to seek affiliation with any particular geological society.

OUTREACH ACTIVITIES

The 50th anniversary of the NACSN in 1995 provided an impetus for the NACSN to consider the status of stratigraphy as a scientific discipline. Discussions at the 50th to 53rd annual meetings led to NACSN organizing a special session titled "50th Anniversary of North American Commission on Stratigraphic Nomenclature" held in June 1997 at the joint convention of the Canadian Society of Petroleum Geologists and the SEPM in Calgary, Alberta. The NACSN also co-sponsored a topical session on the "History of Geologic Mapping" held at the Geological Society of America Annual Meeting in October 1997.

In addition, the deliberations of the Allostratigraphy–Sequence Stratigraphy Committee indicated the desirability for organizing suitable venues for discussion of sequence-stratigraphic nomenclature. In addition to cosponsoring a session on "The Systematics of Sequence Stratigraphy" in Calgary in June 1997, the NACSN also sponsored a topical session on "Alloformations, Synthems, and Sequences" at the Geological Society of America Annual Meeting in Denver in October 1999. In August 2001, the NACSN held an AAPG Hedberg Conference on "Sequence-Stratigraphic and Allostratigraphic Principles and Concepts."

Delays in the publication of the records of the NACSN in the *AAPG Bulletin*, as well as the content and organization of these records, have been a concern since 1995. Records of meetings from 1990 to 1992 and 1992 to 1994 were published by Edwards and Owen (1996) and Easton et al. (1997), respectively. At the 57th annual meeting, it was resolved that the records of the NACSN from 1995 to 2002 would be submitted for publication in a revised format in early 2003.

Finally, in the interest of clarifying to the scientific community the application of the Code to stratigraphic issues, the NACSN occasionally delegates to various commissioners the task of preparing discussions or communications on stratigraphic topics (e.g., Easton, 1996a; Easton et al., 2003).

COMMISSION MEMBERSHIP

Officers of the NACSN were as follows: Chairman: Donald L. Baars (1994–1995), R. Michael Easton (1995–1996), James O. Jones (1996–1997), Alfred C. Lenz (1997–1998), Ismael Ferrusquía-Villafranca (1998–1999), Ernest A. Mancini (1999–2000), Bruce R. Wardlaw (2000–2001), and Lucy E. Edwards

(2001–2002). Vice chairman–secretary: R. Michael Easton (1994–1995), James O. Jones (1995–1996), Alfred C. Lenz (1996–1997), Ismael Ferrusquía-Villafranca (1997–1998), Ernest A. Mancini (1998–1999), Bruce R. Wardlaw (1999–2000), Lucy E. Edwards (2000–2001), and Brian R. Pratt (2001–2002).

The NACSN holds its annual meeting in conjunction with the annual meeting of the Geological Society of America. Annual meeting locations and dates covered by this note were as follows:

50th	New Orleans, Louisiana	November 6, 1995
51st	Denver, Colorado	October 28, 1996
52nd	Salt Lake City, Utah	October 20, 1997
53rd	Toronto, Ontario	October 26, 1998
54th	Denver, Colorado	October 25, 1999
55th	Reno, Nevada	November 13, 2000
56th	Boston, Massachusetts	November 5, 2001
57th	Denver, Colorado	October 27, 2002

Commissioners who served during this period were as follows:

American Association of Petroleum Geologists: Robert R. Jordan, Donald E. Owen, and Susan A. Longacre (all 1995–2002)

Association of American State Geologists: John P. Bluemle (1995–2002), Robert H. Fakundiny (1995–2002), Ernest A. Mancini (1999–2002), Norman Hester (1997–2002), and James Robertson (1995–1996)

Geological Society of America: Donald L. Baars (1995), Lee C. Gerhard (1995–1996), Ardith K. Hansel (1998–2001), W. Burleigh Harris (1995–1998), James O. Jones (1995–1997), David T. King (1997–2000), H. Richard Lane (2002), Ernest A. Mancini (1996–1998), Walter L. Manger (2002), and Christopher G. Maples (2001–2002)

U.S. Geological Survey: Lucy E. Edwards (1995–2002); Randall C. Orndorff (1997–2002); John Pojeta, Jr. (1995–1996); Mitchell W. Reynolds (1995); and Bruce R. Wardlaw (1995–2002)

Geological Survey of Canada: Benoit Beauchamp (1995–1997), A. (Tony) Davidson (1997–2000), Robert J. Fulton (1995–1996), A. P. (Tony) Hamblin (1998–2002), Denis Lavoie (1995), and Terry Poulton (1999–2001)

Canadian Society of Petroleum Geologists: Brian R. Pratt and Ray W. Yole (both 1995–2002)

Geological Association of Canada: William R. Arnott (1998–2000), Robert Michael Easton (1995–2002), and Alfred C. Lenz (1995–1998)

Instituto de Geología de la Universidad Nacional Autónoma de México: Ismael Ferrusquía-Villafranca (1995–2002)

Asociación Mexicana de Geólogos Petroleros: Carlos Manuel Cantú-Chapa (1998–2002)

Sociedad Geológica Mexicana: Jose Carrillo Bravo (1996–1998) and Emiliano Campos-Madrigal (1998–2002)

Commissioners-at-large: Norman P. Lasca (1995–2002) and Paul Seaber (1995–2000)

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